



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

DEC 10 2012

REPLY TO THE ATTENTION OF:

Matthew Stuckey
Chief
Permits Branch
Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, Indiana 46204

Dear Mr. Stuckey:

The U.S. Environmental Protection Agency has reviewed the draft Prevention of Significant Deterioration (PSD) permit and draft Part 70 significant permit modification for Purdue University, permit numbers 157-32230-00012 and 157-32275-00012 respectively, located in West Lafayette, Indiana. To ensure that the source meets Federal Clean Air Act requirements, that the permit will provide necessary information so that the basis of the permit decision is transparent and readily accessible to the public, and that the permit record provides adequate support for the decision, EPA has the following comments:

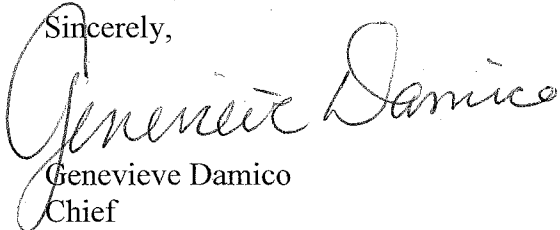
- 1.) Several conditions within Section D.1 of the permit have PSD requirements that cease to apply to the facility when Boiler 1 has been decommissioned or after Boiler 2 is converted to natural gas. Conditions D.1.5 and D.1.5.1 of the draft permit apply specifically to the change of existing operations. EPA recommends including a permit requirement that the facility provide notification of the specific dates for boiler decommissioning and fuel conversion to make clear when these transitions occur.
- 2.) In Condition D.1.5 of the permit, Nitrogen Oxide (NOx) emissions from Boiler 7 are limited to no more than 40 tons during the 180 day period between the startup date of Boiler 7 and the decommissioning of Boiler 1. Please explain how compliance with the NOx emission limit during this period is assured or add sufficient monitoring and recordkeeping to the permit to ensure compliance with this limit.
- 3.) Please clarify whether the coal sampling and analysis procedure in Condition D.1.12.(a) is the same as the one outlined in D.1.12.(b). As currently written, Condition D.1.12(a) of the permit refers to a missing procedure.
- 4.) Conditions D.2.1 and D.2.2 are Sulfur Dioxide (SO2) limits established via a PSD permit issued in 1988 and 326 IAC 7-1.1-2 for Boiler 5. Condition D.2.6(a) of the draft permit establishes the method of compliance with these limits, saying that "[...] a circulating

fluidized bed boiler with alkali injection shall be used as needed to maintain compliance with the [SO₂] limitations in Conditions D.2.1 and D.2.2 for Boiler 5." Please explain what is meant by "as needed" as it is used in this condition. If the circulating fluidized bed boiler is not used at all times to control SO₂ emissions while Boiler 5 is in operation, then please provide further explanation regarding when this control device will be used. Please also clarify whether intermittent operation of this control device will be sufficient to ensure that Boiler 5 meets the SO₂ emission limits.

- 5.) Condition D.3.1 lists several temporary alternative opacity limitations for Boiler 3. Condition D.3.6(a) lists recordkeeping requirements to document the compliance status with Condition D.3.1, which includes data and results from the most recent stack test, opacity exceedances from continuous opacity monitoring system data, or results from EPA Method 9 visible emission readings. Although the recordkeeping permit condition refers to these methods for documenting compliance with the opacity limits for Boiler 3, the permit does not specifically require these monitoring or test methods to show compliance. Please explain how the permit assures compliance with the limits established in condition D.3.1. If necessary, please update the permit to include any additional testing or monitoring that would be necessary to show compliance with the opacity limits.
- 6.) Condition D.4.1 establishes synthetic minor emission limits on Particulate Matter (PM), PM with an aerodynamic cross-section smaller than 10 micrometers and smaller than 2.5 micrometers (PM₁₀ and PM_{2.5}, respectively), NO_x, and SO₂ for Boiler 7. Since these emission limits are synthetic minor limits, compliance with the limits ensures that major PSD requirements would not be applicable to Boiler 7. Currently, Section D.4 of the permit does not include methods of ensuring compliance with these limits. Please explain how compliance with these emission limits will be assured and add sufficient monitoring, testing, recordkeeping, and reporting to assure compliance with the same.
- 7.) Condition D.5.1 includes PM and PM₁₀ synthetic minor emission limits for several units within Coal Segment 2, further identified in this permit condition as emissions from stacks CV1, CV2, and CV3. Condition D.6.1 also establishes PM and PM₁₀ synthetic minor limits for Boiler 1 and Boiler 2's ash handling system. Conditions D.5.4 and D.6.4 require the operation of baghouses to control PM and PM₁₀ emissions with compliance determined by observing Visible Emissions (VE) from each exhaust point and parametric monitoring of the baghouse via pressure drop across the baghouse. Given that Conditions D.5.1 and D.6.1 are written in terms of an hourly emission rate limit, please explain whether VE monitoring and baghouse parametric monitoring sufficiently ensures compliance with the PM emission rates. Please also clarify whether periodic stack testing is required to ensure that pressure drop across the baghouse is indicative of compliance with the synthetic minor limits.

We appreciate the opportunity to provide comments on this permit. If you have any questions, please feel free to contact Michael Langman, of my staff, at (312) 886-6867.

Sincerely,

A handwritten signature in cursive script that reads "Genevieve Damico". The signature is written in dark ink and is positioned above the printed name and title.

Genevieve Damico

Chief

Air Permits Section